

Date of Hearing: February 8, 2008

Committee: Senate Education

Department: Education

Person Testifying: Patricia Hamamoto, Superintendent

Title: S.B. 2635, Relating to School Sports Concussions

Purpose: Requires department of education to implement a concussion evaluation tool for each high school student athlete participating in the sport of football statewide. Appropriation.

Department's Position: The Department of Education (Department) does not support S.B. 2635, due to the present language in the bill. Concussions affect all student athletes of both genders, not only football players. In a study published in the *Journal of Athletic Training* last month, L.M. Gessel, et. al. found that in sports played by both sexes, girls sustained a higher rate of concussions. In the Department, there were 265 concussions (4.9% of all injuries), from July 2007 to January 2008, in various sports (football, 61%; basketball, 14%; wrestling, 7%; cheerleading, 7%; soccer, 5%; volleyball, 4%; and cross country, 1%). To address only football would neglect the health and safety needs of the entire population of student athletes participating in contact sports. Currently there are seven high schools pilot testing the Immediate Post-Concussion Assessment and Cognitive Testing (ImPact) program. The athletic health care trainers (AHCTs) at

these schools have mixed reviews about the use of this product.

While the program provides an objective piece of data for AHCTs to share with the student athlete, parent, coach and physician, interpreting the data has been the major concern.

Most primary care physicians (pediatricians, family practice physicians) and all AHCTs do not have formal training in neuropsychological testing and there are an insufficient number of neuropsychologists that can interpret the data in a timely manner.

Lastly, baseline testing of 400 to 800 student athletes during the pre-season, would be extremely time consuming for the AHCT.

This would leave less time for injury assessment, rehabilitation of student athletes and practice/game coverage. ImPact states testing will be take approximately 20 to 25 minutes, but AHCTs have found it takes them 30 to 45 minutes, depending on the student being tested.

In summary, the Department does not support S.B. 2635 in its present form.

Re: SB 2635, hearing on February 8, 2008

I am writing in opposition to SB 2635.

I am a clinical neuropsychologist at Straub Clinic and Hospital. I have been assisting the Athletic Health Care Trainer Coordinator for the DOE, Mr. Ross Oshiro, with regard to the evaluation of sports-related concussions. I am very familiar with the computerized neuropsychological test battery known as ImPACT, which is a well-established assessment tool for concussions suffered by athletes. I gave a lecture presentation on the ImPACT to all the DOE athletic health care trainers last year, and I have submitted a research paper on ImPACT to the Hawaii Medical Journal for possible publication.

I am opposed to SB 2635 because

1. The proposed neuropsychological evaluations are limited to football head injuries. Participants of other sports, particularly basketball, baseball and soccer, are also vulnerable to head injury, and should not be excluded from these evaluations.
2. The neuropsychological evaluations are limited to the use of the ImPACT test battery. While ImPACT is a very effective neuropsychological test battery, there is a variety of other effective testing instruments that clinical neuropsychologists employ for the assessment of brain injury. The psychologists should not be limited to the use of ImPACT.
3. The bill does not address the involvement of clinical neuropsychologists who are needed to interpret the results of the neuropsychological testing. We cannot presume that there are enough clinical neuropsychologists available to assist athletic trainers at every school. Even if enough clinical neuropsychologists were available, the bill does not offer cost estimates of employing these psychological specialists. The supporters of this bill might be planning to consult mainland neuropsychologists to interpret the computerized ImPACT results, a practice that has its inherent limitations, e.g., the mainland psychologists' unfamiliarity with the unique sociocultural composition of student-athletes in Hawaii.

If you wish to contact me, my phone number is 522-4521, email wtsushima@straub.net, or fax 522-3526.

William T. Tsushima, Ph.D.

Person Testifying: Darryl T. Funai, President, Hawaii Athletic Trainers' Association

Regarding: SB 2635 – Relating to School Sports Concussions

Purpose: To require the Department of Education to implement a concussion evaluation tool for each high school student athlete participating in football statewide.

Statement:

The Hawaii Athletic Trainers' Association (HATA) supports the intent of the bill but has concerns regarding the present form of S.B. 2635.

In a recent study published in the Journal of Athletic Training, concussions represented 8.9% of all high school athletic injuries and 5.8 % of all collegiate athletic injuries. The majority of concussion resulted from participation in football (40.5%), followed by girls' soccer (21.5%), boys' soccer (15.4%), and girls' basketball (9.5%). To focus only of football would ignore almost 60% of all concussions according to this study.

In another study in the Journal of Athletic Training, performance on computerized neuropsychological (NP) tests may be affected by a number of factors including sex, SAT scores, fatigue at the time of testing, and the athletes sport, thus relying solely on NP testing is contraindicated. They recommend that a proper concussion assessment protocol should include data from multiple assessment techniques, such as self-reported symptoms, postural control, and NP testing.

In summary, HATA supports the intent of the bill, however, is opposed to testing only football athletes. Furthermore, relying on NP testing as the ultimate authority in assessing concussed athletes has been proven to be unreliable. For these reasons, HATA proposes the State create a committee of physicians, neuropsychologists, and certified athletic trainers to develop and implement a standard concussion assessment protocol to be followed by all certified athletic trainers and physicians.

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Person Testifying: Glenn Beachy, Head Athletic Trainer, Punahou School

Regarding: SB 2635 – Relating to School Sports Concussions

Purpose: To require the Department of Education to implement a concussion evaluation tool for each high school student athlete participating in football statewide.

Statement:

Neurocognitive testing (NCT) for concussions is an assessment tool used to assist the family physician in the evaluation of concussions and to assist in the athlete's safe return to activity.

While this is an extremely useful tool, it is only one tool used in the treatment of a concussion episode.

Any legislation requiring a concussed student to complete the neurocognitive test before returning to activity would dictate to the medical community the tests and tools required for treatment of this injury. In effect, it overrides any decision made by the physician regarding the concussive episode and would set a precedent for medical treatment.

Concussions are not unique to football players and dictating policy to a limited population is contraindicated. At Punahou, concussions account for 1% of all injuries reported by female athletes and 1.85% of injuries reported by male athletes. True, football is the highest risk sport, with concussions accounting for 2.8% of all football injuries. However, concussions account for 2.19% of all injuries to male soccer players and 2.35% of all injuries for female soccer players. Girls water polo players have a 2.65% concussion rate.

It is not physically possible, or necessary, to administer a test to all athletes participating in contact sports. Time, personnel and equipment are all constraints to this process. This further raises the risk of liability to the school and state if, for some very valid reason, it is impossible to complete the testing protocol for an athlete or for a school.

This may be possible in the collegiate setting, but we should not be dictating policy to this population either.

Education about the test and its meaning is essential for the NCT to have any validity within the medical community. While Punahou uses the ImPact neurocognitive test to assist with return to activity determination, the family physician is the ultimate authority.

For these reasons, I am opposed to SB 2635.

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